

Manually Signed Copy with Exhibits

**SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 11-K**

**[X] ANNUAL REPORT PURSUANT TO SECTION 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]
For the fiscal year ended December 31, 2005**

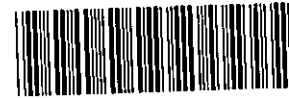
OR

**[] TRANSITION REPORT PURSUANT TO SECTION 15 (d) OF THE
SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]
For the transition period from to**

Commission File number: 000-10906

- A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

The BOC Group, Inc. Savings Investment Plan
C/O The BOC Group, Inc.
575 Mountain Avenue
Murray Hill, NJ 07974



06041318

- B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

The BOC Group, plc
Chertsey Road, Windlesham
Surrey GU 20 6HJ, England

**PROCESSED
JUL 20 2006
JANUARY**

PricewaterhouseCoopers LLP
400 Campus Drive
P. O. Box 988
Florham Park NJ 07932
Telephone (973) 236 4000
Facsimile (973) 236 5000

Report of Independent Registered Public Accounting Firm

To the Participants and Administrator of
The BOC Group, Inc. Savings Investment Plan

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of The BOC Group, Inc. Savings Investment Plan (the "Plan") at December 31, 2005 and December 31, 2004, and the changes in net assets available for benefits for the year ended December 31, 2005, in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental Schedule H, line 4i - Schedule of Assets (Held at End of Year) is presented for the purpose of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

PricewaterhouseCoopers LLP

Florham Park, New Jersey
June 28, 2006

The BOC Group, Inc.
Savings Investment Plan
Financial Statements and Supplemental Schedule
December 31, 2005 and 2004

The BOC Group, Inc.
Savings Investment Plan
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| Note: Other supplemental schedules required by Section 2520.103-10 of the Department of Labor Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable to The BOC Group, Inc. Savings Investment Plan. | |

Report of Independent Auditors

To the Participants and Administrator of
The BOC Group, Inc. Savings Investment Plan

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PricewaterhouseCoopers LLP

Florham Park, New Jersey
June 28, 2006

The BOC Group, Inc.
Savings Investment Plan
Statements of Net Assets Available for Benefits
December 31, 2005 and 2004

| <i>(dollars in 000's)</i> | 2005 | 2004 |
|-----------------------------------|-------------------|-------------------|
| Assets | | |
| Investments | \$ 409,701 | \$ 386,824 |
| Participant loans | <u>8,456</u> | <u>8,759</u> |
| Total investments | 418,157 | 395,583 |
| Receivables | | |
| Participant contributions | <u>-</u> | <u>59</u> |
| Net assets available for benefits | <u>\$ 418,157</u> | <u>\$ 395,642</u> |

The accompanying notes are an integral part of these financial statements.

The BOC Group, Inc.
Savings Investment Plan
Statement of Changes in Net Assets Available for Benefits
Year Ended December 31, 2005

(dollars in 000's)

Additions to net assets attributed to

Investment income

Net appreciation in fair value of investments \$ 34,144

Interest 943

Dividends 192

Net additions attributed to investments 35,279

Contributions - participant 20,563

Total additions 55,842

Deductions from net assets attributed to

Benefits paid to participants (32,962)

Administrative expenses (365)

Total deductions (33,327)

Net increase 22,515

Net assets available for Plan benefits

Beginning of year 395,642

End of year \$ 418,157

The accompanying notes are an integral part of these financial statements.

The BOC Group, Inc.
Savings Investment Plan
Notes to Financial Statements
December 31, 2005 and 2004

1. Plan Description

The following description of The BOC Group, Inc. Savings Investment Plan (the "Plan") provides only general information. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions.

General

The Plan is a defined contribution plan established as of June 1, 1979 by the Board of Directors of The BOC Group Inc. (the "Company"). The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

The Plan's recordkeeper and trustee are JP Morgan Retirement Plan Services and JP Morgan Chase Bank, respectively.

Eligibility

Eligible participants include all employees of the Company, as well as employees of subsidiary and affiliated companies to which the Plan has been extended, except those who are covered by a collective bargaining agreement unless it specifically provides for their participation in the Plan. Eligible employees may enroll in the Plan immediately following their date of hire.

Contributions

The Plan is funded through participant contributions of up to 16% of participants' compensation on either a pre-tax or post-tax basis. Contributions are subject to IRS limitations.

All participant contributions and earnings are immediately vested and are not subject to forfeiture.

Participants age 50 or older may elect to make catch up contributions to the Plan. The maximum catch up contribution in 2004 is \$3,000 that is increased by \$1,000 each year up to 2006, when the maximum is \$5,000. After 2006, the maximum may increase for cost-of-living adjustments.

Participant Accounts

Each participant's account is credited with the participant's contribution and an allocation of Plan earnings, and charged with an allocation of administrative expenses. Allocations are based on the specific investment options in effect in each participant's account balances. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

The BOC Group, Inc.
Savings Investment Plan
Notes to Financial Statements
December 31, 2005 and 2004

Participant Loans

Loans are available to all participants in an amount up to a maximum of the lesser of \$50,000 or 50% of a participant's account balance. The principal and interest must generally be repaid within a maximum period of four and one-half years, with the exception of loans used to acquire, construct, reconstruct or substantially rehabilitate the principal residence of a participant which may have a repayment period up to 15 years. Upon default as defined in the Plan agreement, participants are considered to have received a distribution and are subject to income taxes on the distributed amount. The loans are collateralized by the balance in the participant's account. Interest rates on outstanding loans ranged from 6.0% to 11.5% at December 31, 2005 and 2004. Principal and interest are paid ratably through payroll deductions. A former employee may continue to make loan payments by setting up electronic payments with the record keeper. Participant loans were \$8,456,000 at December 31, 2005 and were \$8,759,000 at December 31, 2004.

Distributions

When a participant retires or terminates employment, the entire vested amount in the participant's account can be distributed in the form of a single payment or 5 annual payments as elected by the participant. If no distribution election is made by the participant and the participant's account balance exceeds \$1,000, the balance in the account will remain in the Plan until a later date but not beyond age 65. When a participant dies, the entire amount in the participant's account is distributed to the participant's beneficiary(ies).

2. Summary of Significant Accounting Policies

Basis of Accounting

The financial statements of the Plan are prepared under the accrual method of accounting.

Payment of Benefits

Benefits are recorded when paid.

Valuation of Investments and Participant Loans

The Plan's investments are stated at fair value except for its benefit-responsive investment contracts, which are stated at contract value. Quoted market prices are used to value investments. Shares of mutual funds are valued at the net asset value of shares held by the Plan at year end. Participant loans are valued at their outstanding balances, which approximate fair value.

Purchases and Sales of Investments

Purchases and sales of investments are recorded on a trade-date basis. Dividends are recorded on the ex-dividend date.

Net Appreciation and Depreciation in the Fair Value of Investments

The Plan presents in the Statement of Changes in Net Assets Available for Plan Benefits the net appreciation (depreciation) in the fair value of its investments which consists of the realized gains or (losses) and the unrealized appreciation (depreciation) on those investments.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions

The BOC Group, Inc.
Savings Investment Plan
Notes to Financial Statements
December 31, 2005 and 2004

that affect the reported amounts of assets and liabilities, and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Risks and Uncertainties

The Plan provides for various investment options in a variety of funds. Investments held by the Plan are exposed to various risks, such as interest rate, market and credit. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect participants' account balances and the amounts reported in the Statements of Net Assets Available for Plan Benefits and the Statement of Changes in Net Assets Available for Plan Benefits.

Reclassifications

Certain prior year reclassifications have been made to conform to the current year financial statement presentation.

3. Tax Status

The Internal Revenue Service has determined and informed the Company by a letter dated February 24, 2004, that the Plan and related trust are designed in accordance with applicable sections of the Internal Revenue Code ("IRC"). Although the Plan has been amended, the Sponsor believes that the Plan continues to be designed and operated in accordance with the applicable sections of the IRC. Therefore, no provision for income taxes has been made.

4. Termination Priorities

Although it has not expressed any intent to do so, the Company reserves the right under the Plan to terminate, alter, amend, or modify the Plan at any time subject to the provisions of ERISA. In the event of Plan termination, the Plan provides that the net assets of the Plan are to be distributed to participating employees in amounts equal to their respective interests in such assets.

5. Plan Expenses

Certain administrative expenses (i.e. custodian/recordkeeping) of the Plan are paid by the Plan. Investment management fees are paid by the Plan and the amount is included in investment expenses in the Statement of Changes in Net Asset Available for Benefits.

The BOC Group, Inc.
Savings Investment Plan
Notes to Financial Statements
December 31, 2005 and 2004

6. Investments

The following table presents the fair value of the Plan's investments that represent 5% or more of the Plan's net assets as of December 31, 2005 and 2004:

| <i>(dollars in 000's)</i> | December 31, | |
|--|---------------------|-------------|
| | 2005 | 2004 |
| American Century, Heritage Fund (2,579,236 and 2,724,689 shares, respectively) | \$ 37,580 | \$ 32,576 |
| American Century, Strategic Asset Allocation - Moderate (5,669,142 and 5,805,652 shares, respectively) | 38,210 | 39,284 |
| Dodge & Cox, Inc., Stock Fund (530,903 and 502,188 shares, respectively) | 72,851 | 65,357 |
| Barclays, Equity Index (4,056,646 and 4,256,511 shares, respectively) | 44,623 | 44,583 |
| American Funds, Growth Fund of America (1,712,048 and 1,773,055 shares, respectively) | 52,834 | 48,529 |
| Investment contract with State Street Bank and Trust Company, #101078 (no maturity date) | 32,122 | 29,398 |
| Investment contract with IXIS Capital Management, #1805 (no maturity date) | 32,099 | 29,376 |
| Investment contract with Monumental Life Insurance Company #MDA00361TR (no maturity date) | 32,118 | 29,394 |
| American Century Small Cap Value Fund (2,179,939 and 1,844,668 shares, respectively) | 21,036 | - |

During 2005, the Plan's investments appreciated (including gains and losses on investments bought and sold, as well as held during the year) in value by \$34,144,000 as follows:

| <i>(dollars in 000's)</i> | Year Ended December 31, 2005 |
|---------------------------------|---|
| BOC company stock | \$ 395 |
| Common/collective funds | 5,770 |
| Registered investment companies | 28,485 |
| Other investments | (506) |
| | <u>\$ 34,144</u> |

The BOC Group, Inc.
Savings Investment Plan
Notes to Financial Statements
December 31, 2005 and 2004

7. Investment Contracts with Insurance Companies

At December 31, 2005, the Plan held benefit-responsive investment contracts with State Street Bank and Trust Company, CDC Financial Products, Inc. and Monumental Life Insurance Company (the "Issuers"). The Issuers maintain the contributions in a general account. The account is credited with earnings on the underlying investments and charged for participant withdrawals and administrative expenses. The contracts are included in the financial statements at contract value \$96,339,000 as reported to the Plan by the Issuers (Note 6). Contract value represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or portion of their investment at contract value.

There are no reserves against contract value for credit risk of the contract issuers or otherwise. The average yield was approximately 5.60% for the year ended December 31, 2005. The crediting interest rate ranged from 5.31% to 6.03% for the year ended December 31, 2005. The crediting rate is based on a formula agreed upon with the issuers and is maintained for the life of the contract.

The underlying investments under the contracts, at fair value, are the JP Morgan Intermediate Bond Fund, \$94,807,000, US Treasury Notes of \$60,000 and \$15,000, and the JP Morgan Liquidity Fund, \$1,469,000.

8. Related-Party Transactions

Certain Plan investments are shares of mutual funds and common/collective funds managed by JP Morgan Chase Bank. JP Morgan Chase Bank is the trustee as defined by the Plan and, therefore, these transactions qualify as party-in-interest transactions. Fees paid by the Plan for the investment management services and benefit payment services amounted to \$362,000. JP Morgan Retirement Services ("JPMRS") is the recordkeeper of the Plan and is therefore a party-in-interest. Fees for services are paid to JPMRS, these transactions qualify as party-in-interest transactions and amounted to \$3,000 for the year ended December 31, 2005.

BOC Group, Inc. also is a party-in-interest to the Plan under the definition provided in Section 3(14) of ERISA. Therefore, BOC Group Company stock fund transactions qualify as party-in-interest transactions. As of December 31, 2005, the market value of investments in the BOC Group Company stock fund was \$4,996,000.

The BOC Group, Inc.
Savings Investment Plan

EIN: 22-2473045

Schedule H, line 4i - Schedule of Assets (Held at End of Year)

December 31, 2005

(dollars in 000's)

| Identity of Issuer | Description of Investments | Market/ Contract Value |
|---------------------------|---|---------------------------------------|
| American Century* | International Growth | \$ 5,397 |
| PIMCO | Total Return | 9,784 |
| American Century* | Heritage | 37,580 |
| American Century* | Small Cap Value | 21,036 |
| American Funds | Perspective | 10,322 |
| American Century* | Strategic Asset Allocation - Conservative | 2,525 |
| American Century* | Strategic Asset Allocation - Moderate | 38,210 |
| American Century* | Strategic Asset Allocation - Aggressive | 4,711 |
| Dodge & Cox | Stock Fund | 72,851 |
| Barclays | Equity Index | 44,623 |
| American Funds | Growth Fund of America | 52,834 |
| JP Morgan* | Dynamic Small Cap | 4,633 |
| American Century* | Brokerage | 3,025 |
| JP Morgan* | Liquidity Fund | 1,469 |
| US Treasury | US Treasury Notes (interest rate 4%, matures 8/31/07) | 60 |
| US Treasury | US Treasury Notes (interest rate 4%, matures 9/30/07) | 15 |
| JP Morgan* | Intermediate Bond Fund | 94,807 |
| The BOC Group, Inc.* | Company Stock Fund | 4,996 |
| JP Morgan Chase* | Synthetic GIC Wrapper | 823 |
| Participant loans | Interest rates ranged from 6.00% to 11.50% and have original maturities of 1 month to 15 years | 8,456 |
| Total assets | | <u>\$ 418,157</u> |

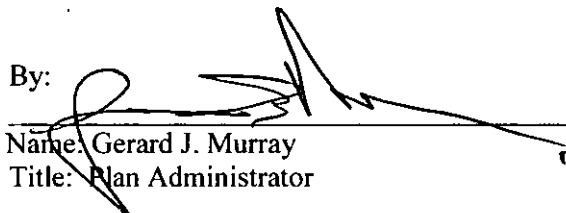
* Parties-in-interest.

As all assets are participant directed there is no requirement to disclose the cost of the assets.

The BOC Group, Inc. Savings Investment Plan. Pursuant to the requirements of the Securities and Exchange Act of 1934, the trustee (or other persons who administer the employee benefit plan) have duly caused this Annual Report to be signed on its behalf by the undersigned, thereunto duly authorized, in Murray Hill, New Jersey, on this 30th day of June 2006.

The BOC Group, Inc. Savings Investment Plan

By:



Name: Gerard J. Murray

Title: Plan Administrator

EXHIBIT INDEX

| <u>Exhibit Number</u> | <u>Description of Document</u> | <u>Sequential Page Number</u> |
|----------------------------------|---------------------------------------|--|
| 23 | Independent Auditors' Consent | 17 |

Exhibit 23

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Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 003-85024) of the BOC Group plc. of our report dated June 28, 2006 relating to the financial statements of The BOC Group, Inc. Savings Investment Plan, which appears in this Form 11-K.

PricewaterhouseCoopers LLP

Florham Park, New Jersey
June 28, 2006